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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/771,620 | 01/30/2001 | Kuo-Liang Tsai | 3313-0271P-SP | 8851 |
| 2292 | 7590 | 11/10/2003 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | CHAU, COREY P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2644 | 2 |

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,620

Applicant(s)

TSAL, KUO-LIANG

Examiner

Corey P Chau

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 6 recites the limitation "the audio signal" in line 22. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 3, 4, 5, 6, 7, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Balanced Line Series of AudioControl (hereafter as AudioControl).

6. AudioControl discloses a device that includes all the limitations recited in Claim 1 through 9. Regarding Claim 1, AudioControl discloses a device used in audio applications (i.e. applications in notebook computer) (Page 3, line 1) where a audio component (i.e. audio controller) outputs a unbalanced signals (i.e. outputs single-ended right and single-ended left) (Page 2, Figs. Multi-Zone Audio and Extending Your Reach) to a balanced line transceiver; the balanced line transceiver (i.e. single-ended signal to differential signal converter) grouped with another balanced line transceiver (i.e. differential signal to single-ended signal converter) to create a driver/receiver system wherein the balanced line transceiver converts the inputted unbalanced signals (i.e. single-ended right and single-ended left) to balanced (i.e. differential) signals and transmits the signals to the other balanced line transceiver that converts the balanced signals to unbalanced signals (Page 1, Fig. Great Sound Goes The Distance; Page 2, Fig. Extending Your Reach; Page 3, Fig. BLX-10). AudioControl also discloses a balanced line driver grouped together with a balanced line receiver to converts the inputted unbalanced signals to balanced signals and transmits the signals to the balanced line receiver that converts the balanced signals to unbalanced signals (Page 2, Figs. Multi-Zone Audio, Extending Your Reach, and Distribution; Page 3, Figs. BLD-10 and BLR-10).

7. Regarding Claim 2, AudioControl discloses a balanced signal that has a first right audio signal (Page 1, Fig. Great Sound Goes The Distance; Page 2, Fig. Extending Your Reach; Page 3, Fig. BLX-10).

8. Regarding Claim 3, AudioControl discloses a balanced signal that has a second right audio signal (Page 1, Fig. Great Sound Goes The Distance; Page 2, Fig. Extending Your Reach; Page 3, Fig. BLX-10).
9. Regarding Claim 4, AudioControl discloses a balanced signal that has a first left audio signal (Page 1, Fig. Great Sound Goes The Distance; Page 2, Fig. Extending Your Reach; Page 3, Fig. BLX-10).
10. Regarding Claim 5, AudioControl discloses a balanced signal that has a second left audio signal (Page 1, Fig. Great Sound Goes The Distance; Page 2, Fig. Extending Your Reach; Page 3, Fig. BLX-10).
11. Regarding Claim 6, AudioControl discloses a peripheral device to play the unbalanced audio (Page 2, Figs. Multi-Zone Audio, Extending Your Reach, and Distribution).
12. Regarding Claim 7, AudioControl discloses a device wherein the peripheral device is an audio jack (Page 2, Figs. Multi-Zone Audio, Extending Your Reach, and Distribution).
13. Regarding Claim 8, AudioControl discloses a device wherein the peripheral device is a speaker (Page 2, Figs. Multi-Zone Audio, Extending Your Reach, and Distribution).
14. Regarding Claim 9, AudioControl discloses a device wherein the peripheral device is a CD player and it is inherent that the CD player has an output socket that an earphone can be connected to (Page 2, Figs. Multi-Zone Audio, Extending Your Reach, and Distribution).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to differential audio device in general:

U.S. Pat. No. 6,587,565 to Choi.

U.S. Pat. No. 5,970,153 to Petroff.

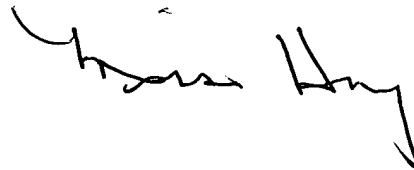
Burr – Brown, Audio Balanced Line Drivers, DRV134 and DRV135

Analog Devices, -6dB Differential Line Receiver, SSM2143

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P Chau whose telephone number is (703)305-4865. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.



MINSUN OH HARVEY
PRIMARY EXAMINER

October 28, 2003